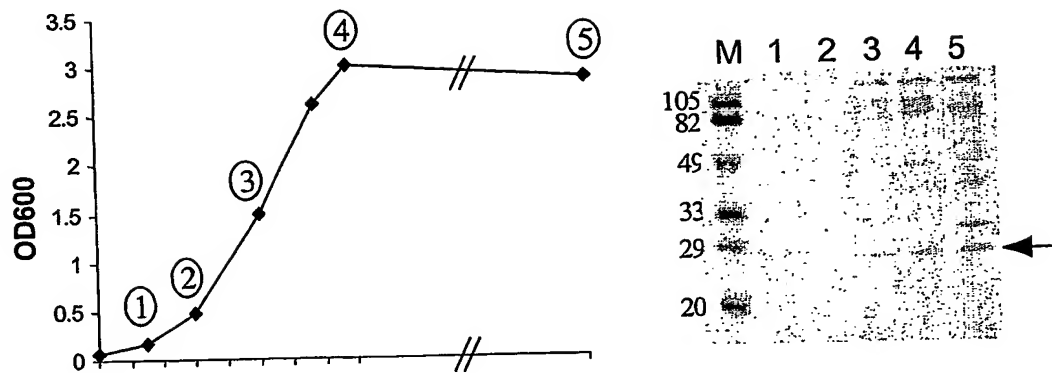


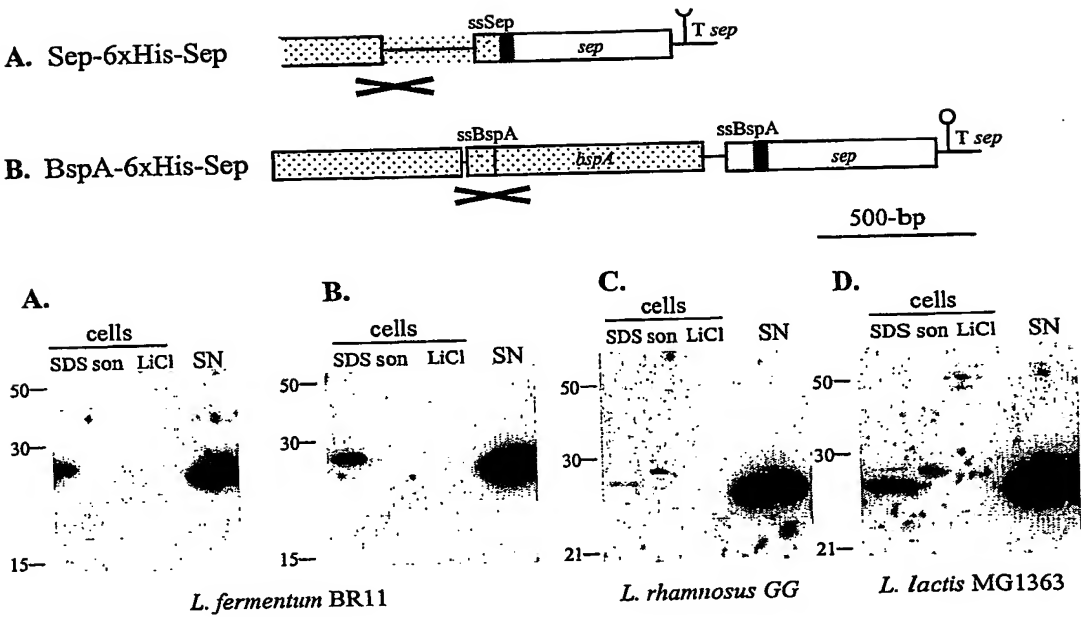
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Figure 1.



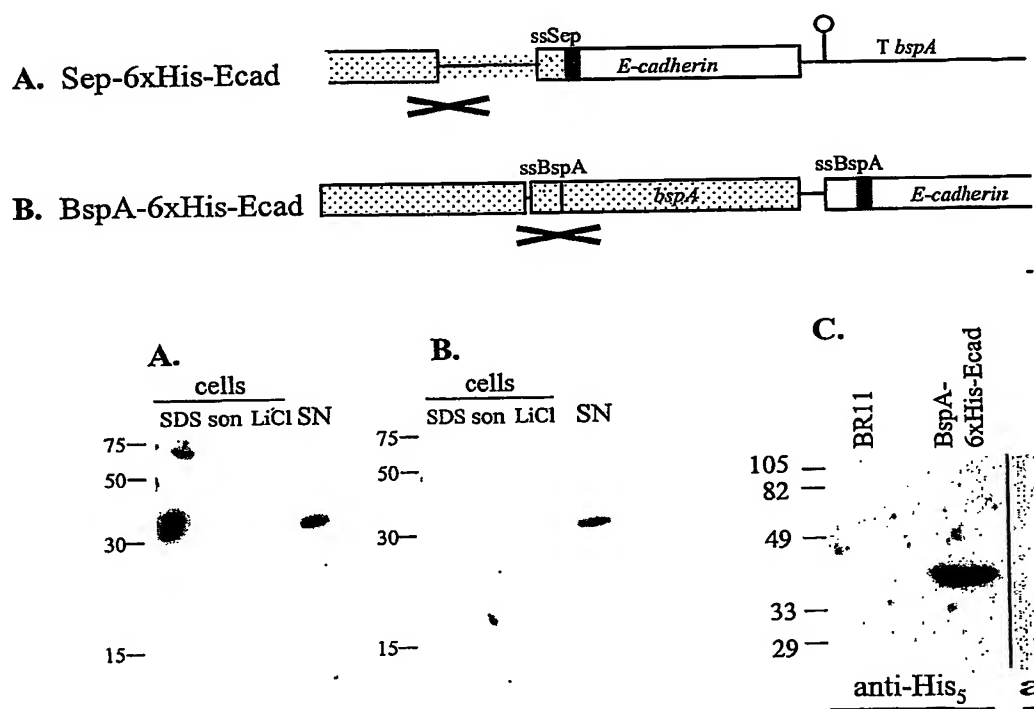
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Figure 2.



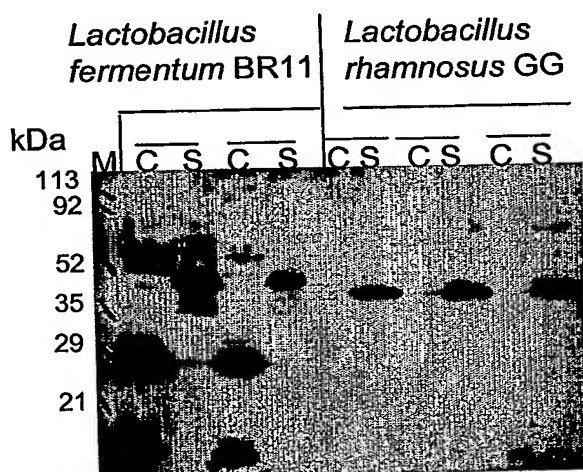
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Figure 3.



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Figure 4.



Western blot probed with
anti-His₅ monoclonal
antibody.

C = cell-associated extracts
S = supernatant extracts

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Figure 5.

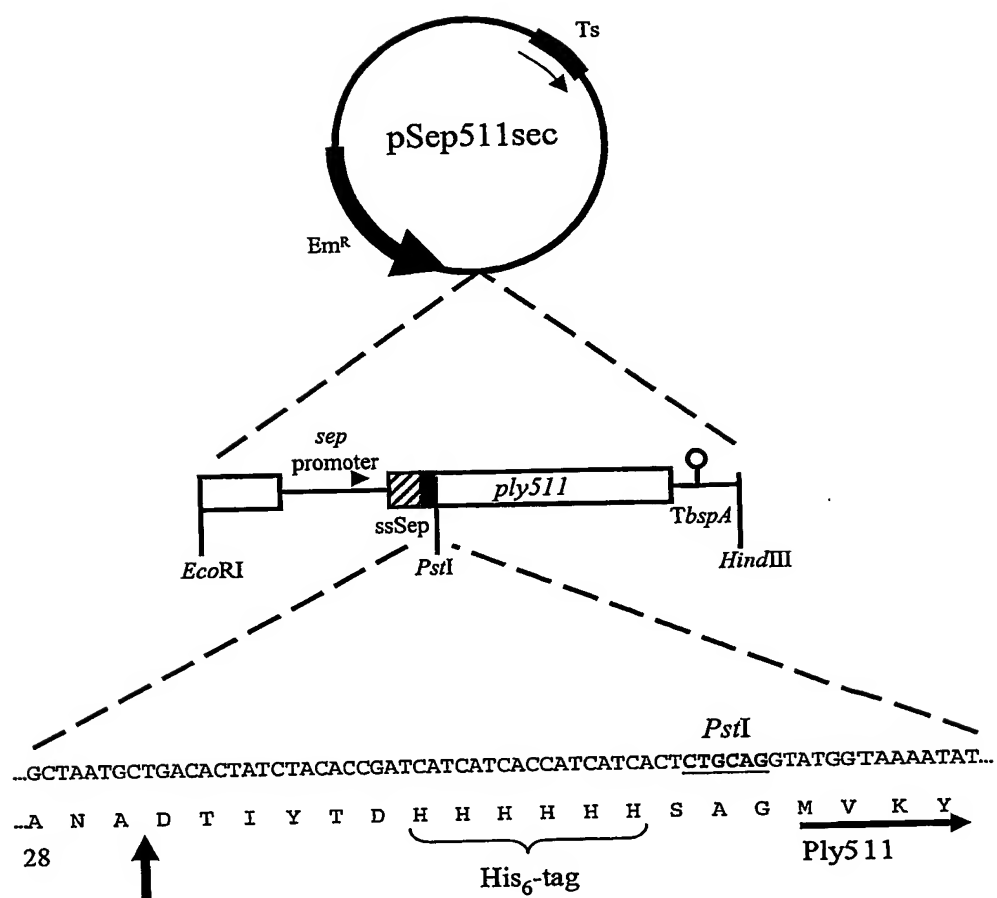
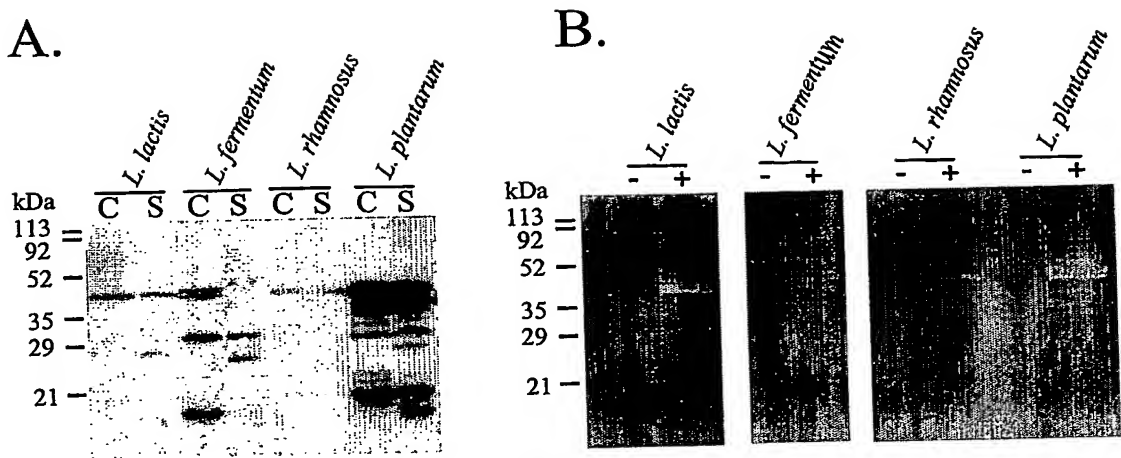
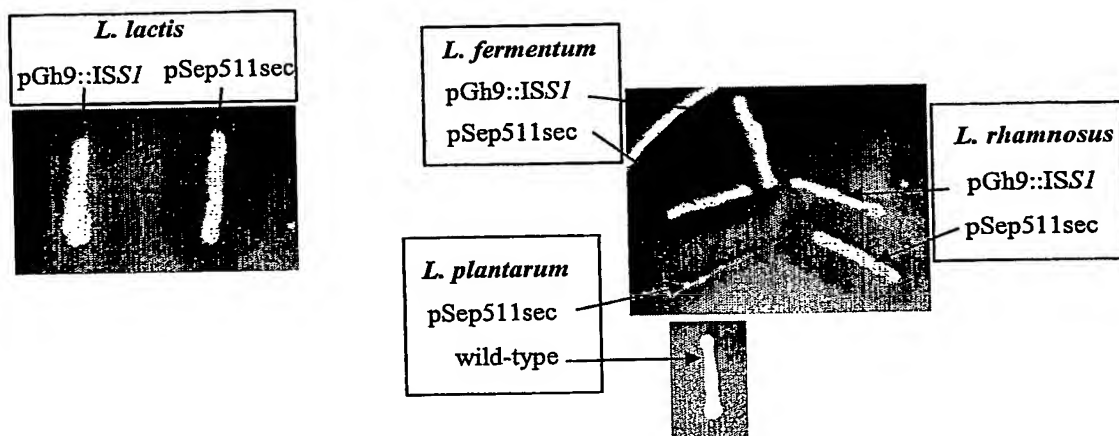


Figure 6.



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5 Figure 7.



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Figure 8NH₂-

DTIYTVQSGDTLSGISYKFAKDNSMINDLAKKNNIQDINKIFVGQKLIK-COOH

Figure 9

5

NH₂-SYTSNASGSEAAKAWIAGRESGGNYNATNGQYIGKYQLAASYLGGDYSPANQ
ERVADQYVASRYGSWTAAQQFWQANGWY-COOH**Figure 10**

10

NH₂-SDGEIQEYNAQNAANANVANNTQATQQQTAQAQPQQAQSQANQ-
COOH**Figure 11**NH₂-MISKKNFAKVSATLGAVALGVSATATAANA-COOH**Figure 12**NH₂-

15

DTIYTVQSGDTLSGISYKFAKDNSMINDLAKKNNIQDINKIFVGQKLIKSDGEIQE
YNAQNAANANVANNTQATQQQTAQAQPQQAQSQANQSYTSNASGSEAAK
AWIAGRESGGNYNATNGQYIGKYQLAASYLGGDYSPANQERVADQYVASRYGS
WTAAQQFWQANGWY-COOH**Figure 13**

20

NH₂-MISKKNFAKVSATLGAVALGVSATATAANADTIYTVQSGDTLSGISYKFAKDNS
MINDLAKKNNIQDINKIFVGQKLIKSDGEIQEYNAQNAANANVANNTQATQQQ
TAQAQPQQAQSQANQSYTSNASGSEAAKAWIAGRESGGNYNATNGQYIGKYQ
LAASYLGGDYSPANQERVADQYVASRYGSWTAAQQFWQANGWY-COOH

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Figure 14

5'-

ATGATTTCTAAGAAAACTTTGCTAAAGTATCTGCTACTCTTGGTGCAGTGGC
CTTAGGTGTTAGTGCAACGGCTACTGCTGCTAATGCT-3'

5 **Figure 15**

5'-

GACACTATCTACACCGTACAAAGTGGTGACACACTTTCAGGTATTTCTTACAA
ATTTGCTAAAGACAACAGTATGATCAATGATCTTGCTAAGAAGAACAATATT
CAAGATATTAACAAGATTTTTGTTGGTCAAAAGTTAATCATCAAG-3'

10 **Figure 16**

5'-

AGCGATGGTGAAATTCAAGAATACAATGCTCAAAATGCAGCTAATGCAAATG
TAGCAAACAACAATACTCAAGCTACACAACAACAACTGCTCAAGCACAAAC
CTCAACAAGCACAAAGCCAAGCTAACCAA-3'

15 **Figure 17**

5'-

AGCTACACTTCAAATGCTTCAGGTTCAGAAAGCTGCTGCTAAAGCTTGGATTGC
CGGTCGTGAATCAGGTGGTAACTACAACGCCACAAACGGTCAATACATTGGT
AAGTACCAATTAGCTGCATCATACTTGGTGGTGACTACTCACCAGCTAACC
20 AAGAACGCGTTGCTGACCAATACGTTGCAAGTCGTTACGGTTCTTGGACTGCT
GCCCAACAATTCTGGCAAGCAAACGGTTGGTACTAA-3'

Figure 18

5'-

GACACTATCTACACCGTACAAAGTGGTGACACACTTTCAGGTATTTCTTACAA
25 ATTTGCTAAAGACAACAGTATGATCAATGATCTTGCTAAGAAGAACAATATT
CAAGATATTAACAAGATTTTTGTTGGTCAAAAGTTAATCATCAAGAGCGATG
GTGAAATTCAAGAATACAATGCTCAAAATGCAGCTAATGCAAATGTAGCAAA
CAACAATACTCAAGCTACACAACAACAACTGCTCAAGCACAACTCAACAA

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GCACAAAGCCAAGCTAACCAAAGCTACACTTCAAATGCTTCAGGTTCAAGAAG
CTGCTGCTAAAGCTTGGATTGCCGGTCGTGAATCAGGTGGTAACTACAACGC
CACAAACGGTCAATACATTGGTAAGTACCAATTAGCTGCATCATACCTTGGT
GGTGACTACTCACCAGCTAACCAAGAACGCGTTGCTGACCAATACGTTGCAA
5 GTCGTTACGGTTCTTGGACTGCTGCCCAACAATTCTGGCAAGCAAACGGTTG
GTACTAA-3'

Figure 19

5'-

ATGATTTCTAAGAAAACTTTGCTAAAGTATCTGCTACTCTTGGTGCAAGTGGC
10 CTTAGGTGTTAGTGCAACGGCTACTGCTGCTAATGCTGACACTATCTACACCG
TACAAAGTGGTGACACACTTTCAGGTATTTCTTACAAATTTGCTAAAGACAAC
AGTATGATCAATGATCTTGCTAAGAAGAACAATATTCAAGATATTAACAAGA
TTTTTGTTGGTCAAAAGTTAATCATCAAGAGCGATGGTGAAATTCAAGAATA
CAATGCTCAAAATGCAGCTAATGCAAATGTAGCAAACAACAATACTCAAGCT
15 ACACAACAACAACTGCTCAAGCACAACCTCAACAAGCACAAAGCCAAGCT
AACCAAAGCTACACTTCAAATGCTTCAGGTTCAAGAAGCTGCTGCTAAAGCTT
GGATTGCCGGTCGTGAATCAGGTGGTAACTACAACGCCACAAACGGTCAATA
CATTGGTAAGTACCAATTAGCTGCATCATACCTTGGTGGTGACTACTCACCAG
CTAACCAAGAACGCGTTGCTGACCAATACGTTGCAAGTCGTTACGGTTCTTG
20 GACTGCTGCCCAACAATTCTGGCAAGCAAACGGTTGGTACTAA-3'

Figure 20

5'-

ATGATHWSNAARAARAAYTTYGCNAARGTNWSNGCNACNYTNGGNGCNGTN
GCNYTNGGNGTNWSNGCNACNGCNACNGCNGCNAAAYGCN-3'

Figure 21

5'-

GAYACNATHHTAYACNGTNCARWSNGGNGAYACNYTNWSNGGNATHWSNTA
YAARTTYGCNAARGAYAAYWSNATGATHAAYGAYYTNGCNARAARAAYA
AYATHCARGAYATHAAYAARATHHTTYGTNGGNCARAARYTNATHATHAAR-3'

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Figure 22

5'-

WSNGAYGGNGARATHCAR GARTAYAA YGCNCARAAYGCNGCNAAYGCNAA
YGTNGCNAAYAA YAA YACNCARGCNACNCARCARCARACNGCNCARGCNCA
5 RCCNCARCARGCNCARWSNCARGCNAAYCAR-3'

Figure 23

5'-

WSNTAYACNWSNAAYGCNWSNGGNWSNGARGCNGCNGCNAARGCNTGGAT
HGCNGGNMGNGARWSNGGNGGNAAYTAYAA YGCNACNAAYGGNCARTAYA
10 THGGNAARTAYCARYTNGCNGCNWSNTAYYTNGGNGGNGAYTAYWSNCCNG
CNAAYCARGARMGNGTNGCNGAYCARTAYGTNGCNWSNMGNTAYGGNWSN
TGGACNGCNGCNCARCARTTYTGGCARGCNAAYGGNTGGTAY-3'

Figure 24

5'-

GAYACNATHTAYACNGTNCARWSNGGNGAYACNYTNWSNGGNATHWSNTA
15 YAARTTYGCNAARGAYAA YWSNATGATHAAYGAYYTNGCNAARAARAAYA
AYATHCARGAYATHAAYA ARATHTTYGTNGGNCARAARYTNATHATHAARW
SNGAYGGNGARATHCARGARTAYAA YGCNCARAAYGCNGCNAAYGCNAA YG
TNGCNAAYAA YAA YACNCARGCNACNCARCARCARACNGCNCARGCNCARC
20 CNCARCARGCNCARWSNCARGCNAAYCARWSNTAYACNWSNAAYGCNWSN
GGNWSNGARGCNGCNGCNAARGCNTGGATHGCNGGNMGNGARWSNGGNGG
NAAYTAYAA YGCNACNAAYGGNCARTAYATHGGNAARTAYCARYTNGCNGC
NWSNTAYYTNGGNGGNGA YTAYWSNCCNGCNAAYCARGARMGNGTNGCNG
AYCARTAYGTNGCNWSNMGNTAYGGNWSNTGGACNGCNGCNCARCARTTYT
25 GGCARGCNAAYGGNTGGTAY-3'

Figure 25

5'-

ATGATHWSNAARAARAAY TTYGCNAARGTNWSNGCNACNYTNGGNGCNGTN
GCNYTNGGNGTNWSNGCNACNGCNAACNGCNGCNAAYGCNGAYACNATHTAY

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ACNGTNCARWSNGGNGAYACNYTNWSNGGNATHWSNTAYAARTTYGCNAA
 RGAYAAAYWSNATGATHAAYGAYYTNGCNAARAARAAYAYATHCARGAYA
 THAAYAARATHHTTYGTNGGNCARAARYTNATHATHAARWSNGAYGGNGARA
 THCARGARTAYAAYGCNCARAAYGCNGCNAAYGCNAAYGTNGCNAAYAAYA
 5 AYACNCARGCNACNCARCARCARACNGCNCARGCNCARCCNCARCARGCNC
 ARWSNCARGCNAAYCARWSNTAYACNWSNAAYGCNWSNGGNWSNGARGCN
 GCNGCNAARGCNTGGATHGCNGGNMGNGARWSNGGNGGNAAYTAYAAYGC
 NACNAAYGGNCARTAYATHGGNAARTAYCARYTNGCNGCNWSNTAYYTNGG
 NGGNGAYTAYWSNCCNGCNAAYCARGARMGNGTNGCNGAYCARTAYGTNG
 10 CNWSNMGNTAYGGNWSNTGGACNGCNGCNCARCARTTYTGGCARGCNAAY
 GGNTGGTAY-3'

Figure 26

TAAAGATAGTTATAAACGGAAAATAAAGGGCGGTTTTGGAGCAAATA
 TGAAATTTTTGCGAAGAAATCAGCTTTTTTTATTTATTTTTTTATAAATCATCT
 15 GTAAAAGTTATGCAAACCGAAAACGCAACCCGCACAAGGAATTAGCCGATT
 ATGACTATAATATTTTAAAAGCTATATTACAAAAAGCAAACGGAGAGTAGTA
 AATAGAAAT

-35 -10/-35 -10

GGTGCTGTTACAGCTTTGTAATAATAAGAGGTGTAGTATATAGGGTGT
 20 GAAACGGAAAAGATAATTTGCTAAATAATAAAGGATGGTTATTTAATTT

Figure 27

-----> <-----

AATAAATAAGATTAATCAATTTTATTGCGAGACTGATGGAATATTATT
 TCCTTCTGTCTCGCTTTTTTGGGCTAATATGTTATAATGGTAGTACTTCTTATG
 25 GGGATGTTTATGGATTTCGACAGGTATAGGTTCGAGTTTCAACTGCGTTT

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